P-005

The obstructive interval predicts pregnancy chance in post-vasectomy patients undergoing intracytoplasmic sperm injection with surgical sperm retrieval

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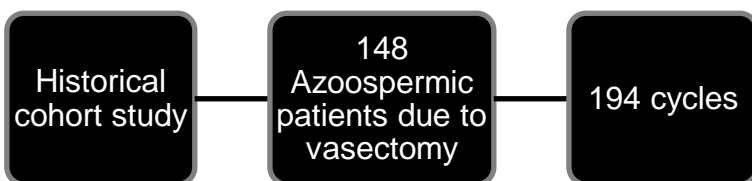
WHAT IS KNOWN ALREADY

Nearly 6% of the couples with obstructive azoospermia due to prior vasectomy often seek medical care for vasectomy reversal. Although satisfactory pregnancy rates have been demonstrated after reversal, some patients still struggle to achieve pregnancy after reversal or even opt to undergo ICSI with surgical sperm retrieval. The obstructive interval is an important factor to consider, since higher incidence of anti-sperm antibodies and sperm clumping with decreased motility have been reported to occur over time in vasectomized men. The literature addressing the influence of obstructive interval (OI) on ICSI outcomes, with surgical sperm retrieval (SSR), is scarce.

OBJECTIVE

To investigate the influence of the OI on SSR and ICSI outcomes in couples with previous vasectomy

MATERIALS AND METHODS

Historical cohort study — 148 Azoospermic patients due to vasectomy — 194 cycles

| General Mixed Models | • Associations between obstructive interval and the SSR and ICSI outcomes |

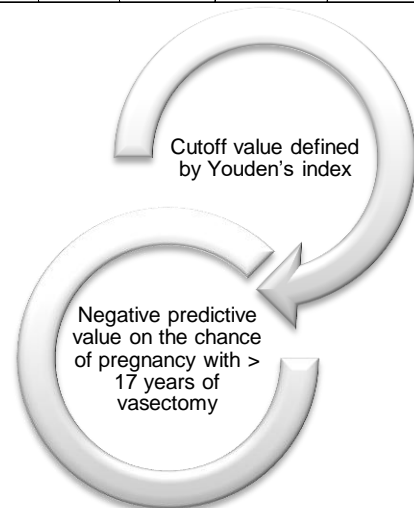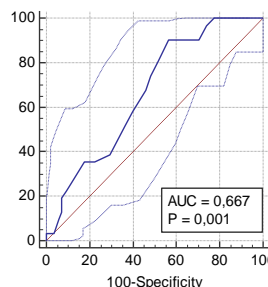| ROC curve analysis | • Predictive value of obstructive interval on pregnancy achievement |

| Youden's index | • The best cutoff value |

RESULTS

Influence of the obstructive interval on SSR outcomes

SSR Parameter	β	SE	p-value	95% CI Lower	95% CI Upper
Sperm during PESA	-0.032	0.012	0.009	-0.056	-0.009
Motile sperm during PESA	-0.031	0.012	0.010	-0.054	-0.008
Convert to TESA	0.012	0.004	0.003	0.004	0.019

Influence of the obstructive interval on the outcomes of ICSI with SSR

ICSI outcome	β	SE	p-value	95% CI Lower	95% CI Upper
Fertilization rate	-0.098	0.302	0.747	-0.696	0.500
D2 high-quality embryos	-0.001	0.003	0.777	-0.007	0.005
D3 high-quality embryos	0.001	0.003	0.472	-0.003	0.007
Blastocyst development	-0.011	0.004	0.014	-0.019	-0.002
Clinical pregnancy	-0.016	0.007	0.031	-0.031	-0.001
Implantation	-1.107	0.530	0.039	-2.157	-0.056
Miscarriage	0.006	0.009	0.483	-0.012	0.025

ROC curve for predicting clinical pregnancy using OI as test variable

AUC = 0,667
P = 0,001

100-Specificity

Cutoff value defined by Youden's index

Negative predictive value on the chance of pregnancy with > 17 years of vasectomy

| Sensitivity | • 90.32 |
| Specificity | • 43.53 |

CONCLUSION

For the patients planning on being vasectomized, we recommend sperm banking. For those who are already vasectomized, we suggest that they seek for reproductive medical help as soon as the fatherhood desire is felt. The use of ICSI with TESA should be considered when pregnancy has failed with PESA.